WHAT IS CLAIMED IS:

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1. A method for fabricating a semiconductor device, comprising the steps of:

forming an overhanging structure having an umbrella-shaped portion on a semiconductor layer;

forming a protective film to cover a surface of said structure;

processing said protective film by removal so that an edge thereof on said semiconductor layer is positioned inside an edge of said umbrella-shaped portion;

depositing an electrode material on said semiconductor layer using said umbrella-shaped portion as a mask; and

processing said electrode material to form an electrode at an interval from an edge of said protective film.

2. The method for fabricating a semiconductor device according to claim 1,

wherein, in said step of processing said protective film, said protective film is left in a state of existing inside said edge of said umbrella-shaped portion on said semiconductor layer.

3. The method for fabricating a semiconductor device according to claim 2,

wherein, in said step of processing said protective film, a mask covering an area under said umbrella-shaped portion with an edge thereof being

positioned inside said edge of said umbrella-shaped portion is formed, and using said mask, said protective film is selectively removed.

4. The method for fabricating a semiconductor device according to claim 3, in forming said mask, further comprising the steps of:

applying a resist onto an entire surface including an area under said umbrella-shaped portion;

exposing an entire surface of said resist to light; and

developing said resist so that an unexposed part thereof selectively remains in an area under said umbrella-shaped portion.

5. The method for fabricating a semiconductor device according to claim 2,

wherein, in said step of processing said protective film, said protective film is etched by an etching method having directivity with respect to a surface, instead of using a mask, and an edge of said protective film is made to be positioned inside an edge of said umbrella-shaped portion by controlling the amount of etching.

6. The method for fabricating a semiconductor device according to claim 1,

wherein, in said step of processing said protective film, said protective film is left in a state in which said protective film is substantially removed from an surface of said semiconductor layer.

7. The method for fabricating a semiconductor device according to claim 6, in said step of processing said protective film, further comprising the steps of:

forming a resist covering an entire surface including an area under said umbrella-shaped portion, constituted in a manner in which a first layer having high optical sensitivity and a film thickness covering a part of an area under said umbrella-shaped portion and a second layer having low optical sensitivity are laminated;

exposing an entire surface of said resist to light; and

forming a mask for processing said protective film by, in an area under said umbrella-shaped portion, developing said resist according to the respective optical sensitivities of said first layer and said second layer to be left into a shape covering only a surface of said structure in an area under said umbrella-shaped portion.

8. The method for fabricating a semiconductor device according to claim 1,

wherein said structure is an emitter structure of a bipolar transistor, and

said electrode is a base electrode of a bipolar transistor.

9. The method for fabricating a semiconductor device according to claim 1,

wherein said structure is a gate electrode of a field effect transistor, and

said electrode is a source electrode and a drain electrode of a field effect transistor.

10. A semiconductor device comprising:

a semiconductor layer;

an overhanging structure formed on said semiconductor layer and having an umbrella-shaped portion;

a protective film covering at least a part of a surface of said structure with an edge thereof on said semiconductor layer being positioned inside an edge of said umbrella-shaped portion; and

an electrode formed at a position outside said umbrella-shaped portion at an interval from an edge of said protective film on said semiconductor layer.

11. The semiconductor device according to claim 10,

wherein said protective film is formed into a state of existing inside an edge of said umbrella-shaped portion on said semiconductor layer.

12. The semiconductor device according to claim 10,

wherein said protective film is formed so that an edge thereof is positioned at a contact point of a root of said structure and said semiconductor layer.

13. The semiconductor device according to claim 10,

wherein said structure is an emitter structure of a bipolar transistor, and

said electrode is a base electrode of a bipolar transistor.

14. The semiconductor device according to claim 10,

wherein said structure is a gate electrode of a field effect transistor, and

said electrode is a source electrode and a drain electrode of a field effect transistor.